GENTLEMEN'S SUITINGS

OBTAINED FROM PRACTICE

TRADE MARK

CASSELLA COLOR COMPANY

182 and 184 Front Street,

NEW YORK.

Boston: 39 Oliver Street

Philadelphia: 126 and 128 South Front Street.

Providence: 64 Exchange Place.

Atlanta: 47 North Pryor Street.

Montreal, Canada, 59, William Street.

No. 3303

Franklin Institute Library
PHILADELPHIA

Class 667.2 Book C275
3303

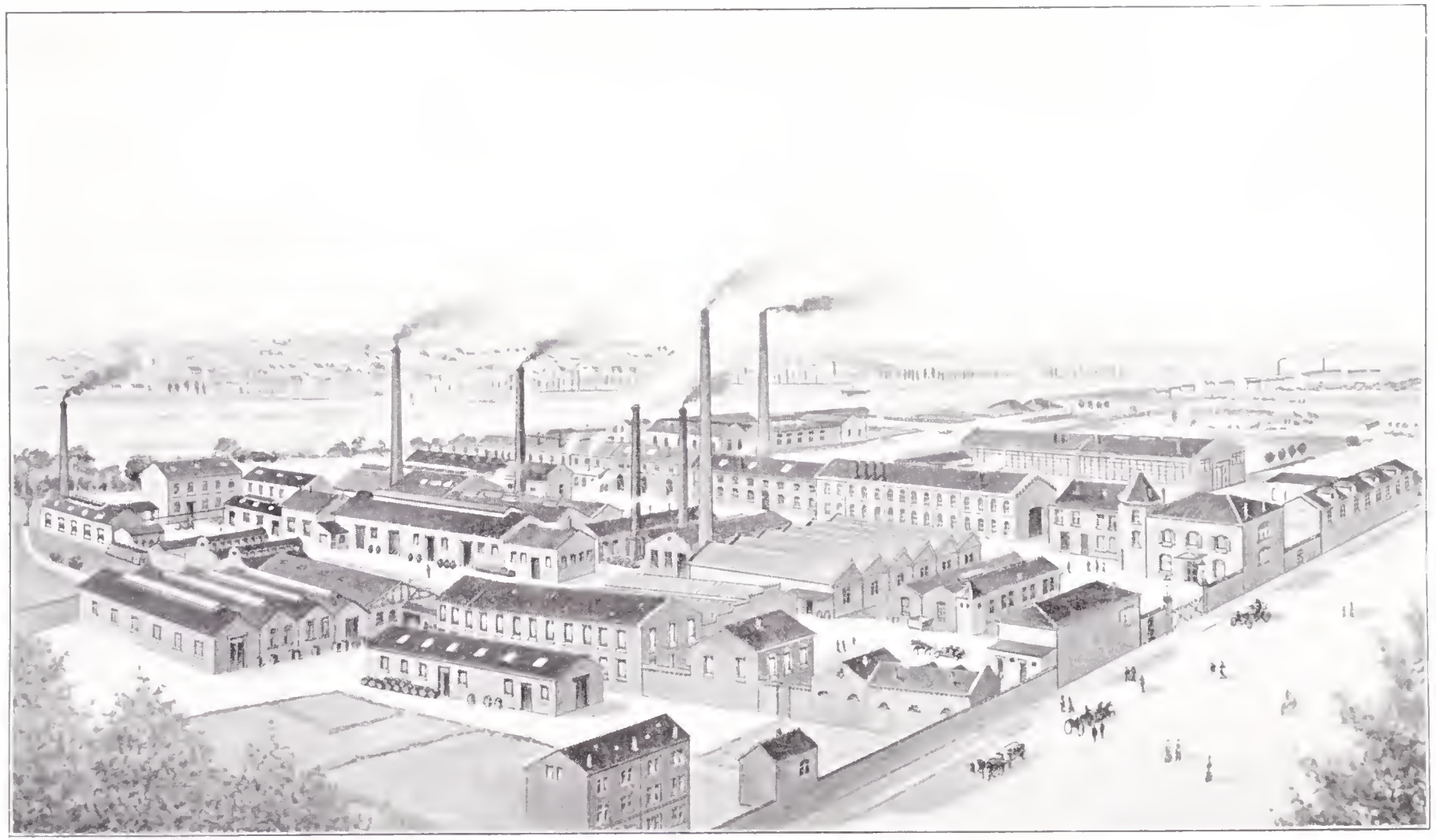
Accession 65721

REFERENCE

GIVEN BY

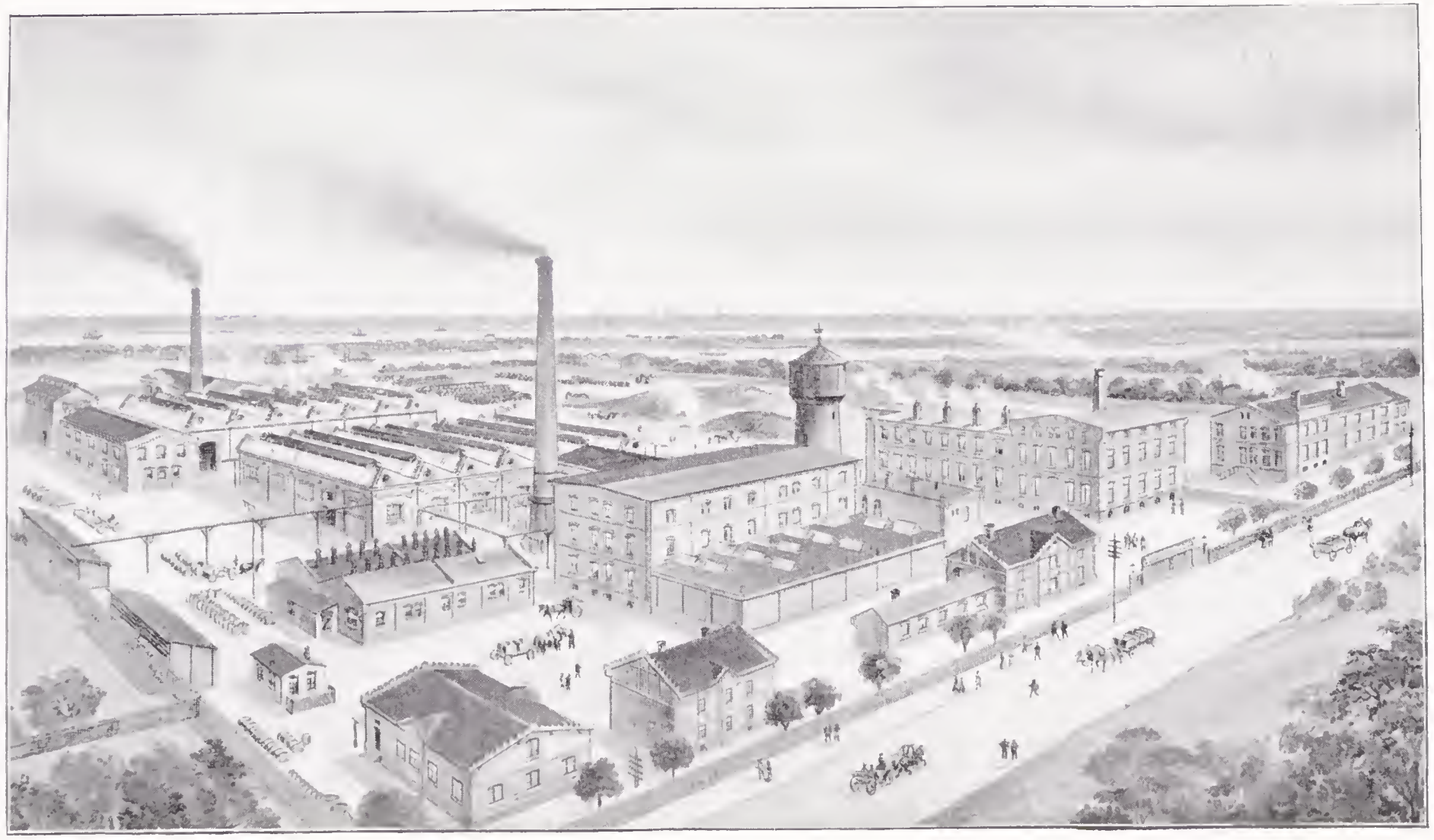
Company

MANUFACTURE LYONNAISE DE MATIÈRES COLORANTES, LYONS.



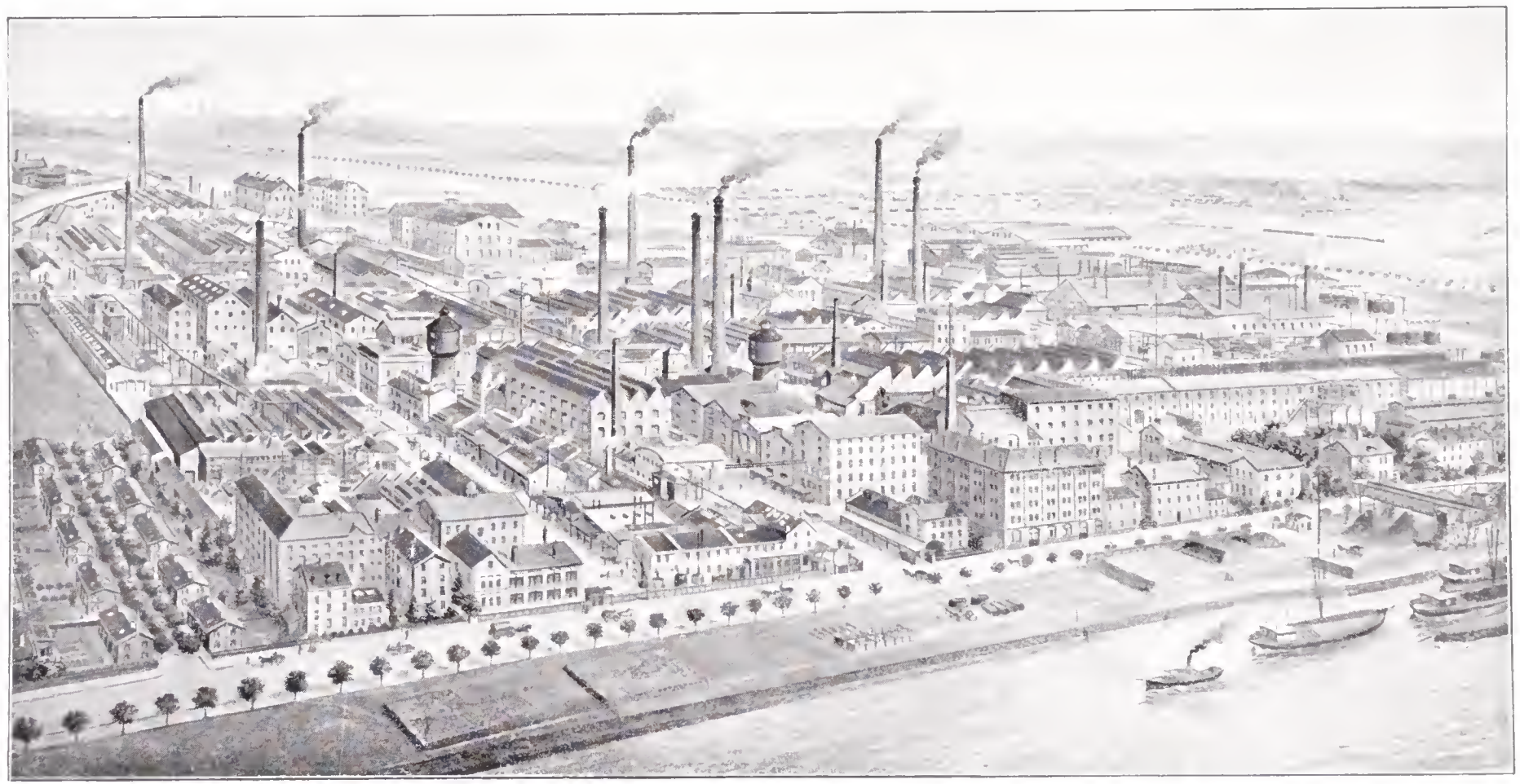
Works "La Mouche".

RUSSIAN ANILINE COLOUR WORKS LEOPOLD CASSELLA & Co, RIGA.



Works at Riga.

LEOPOLD CASSELLA & Co., G. m. b. H., FRANKFORT O. M.



Works at Mainkur near Frankfort o. M.

GENTLEMEN'S SUITINGS

OBTAINED FROM PRACTICE

TRADE- MARK.

CASSELLA COLOR COMPANY

182 AND 184 FRONT STREET

NEW YORK

BOSTON: 39 OLIVER STREET

PHILADELPHIA: 126 AND 128 SOUTH FRONT STREET

PROVIDENCE: 64 EXCHANGE PLACE

ATLANTA: 47 NORTH PRYOR STREET

MONTREAL: CANADA: 59 WILLIAM STREET.

BLUE DYED IN THE PIECE WITH PERI WOOL BLUE.

The colouring matters belonging to the *Peri Wool Blue group* — **Peri Wool Blue B, BG** and **G** — are dyed in the most simple manner, and yield shades of excellent fastness to light and very good fastness to rubbing, steaming and perspiration. Cotton selvedges or effect threads are not stained at all.

These dyestuffs are used extensively for the production of blue to dark blue shades on better class gentlemen's suitings, tapestry cloth, carriage cloth, cap cloth, etc. They are very suitable also for the dyeing of goods which are liable to crease or crimp, or show similar faults, such faults being best avoided by dyeing with sulphuric acid in a decidedly acid bath.

The carbonising of the materials is best carried out previous to dyeing, in which case a neutralising of the carbonised goods is not required.

Method of Dyeing:

Charge the dyebath with

30 % Glauber's salt crystals and
15 % bisulphate of soda or
6 % sulphuric acid,

and the requisite amount of dyestuff, enter the clean, wetted goods handwarm, raise in about an hour to boiling temperature, and boil severely for 1¼ to 1½ hours.

Carbonised goods which have not been neutralised are dyed with Glauber's salt alone, a little bisulphate of soda or sulphuric acid being added later on, if necessary, to exhaust the bath.

For subsequent shading with small quantities of easily levelling colours

Azo Wool Blue SE
Tetra Cyanole V
Cyanole Fast Green G
Azo Orseille BB
Orange GG

are used, and may be added direct to the boiling liquor. In case the dyeing is off shade considerably, and an addition of a further amount of Peri Wool Blue required, the bath should first be cooled off and then again slowly brought to the boil.

Form 213.

NOTE

NAPHTYLAMINE BLACK IS THE SCIENTIFIC NAME OF THE COLOR KNOWN COMMERCIALLY AS ALIZARINE BLACK.

THE LANACYL COLORS ARE KNOWN COMMERCIALLY AS ALIZARINE LANACYL COLORS.

65721

1

Peri Wool Blue pat. B and G
shaded with
Acid Violet 6BS

2

Peri Wool Blue pat. B and G

3

Peri Wool Blue pat. B and G

BLUE DYED IN THE PIECE
WITH
LANACYL NAVY BLUE B
AND
ALPHANOL BLUE BR EXTRA, GN AND 5RN.

Lanacyl Navy Blue B and the slightly more bluish **"BB"** brand are employed principally for cheaper grade gentlemen's cloths. The dyeings possess good fastness to light and also excellent fastness to rubbing, carbonising, and steaming; cotton effect threads and selvedges are not stained.

For shading towards Red, Lanacyl Violet BF and B are used, and towards Green, Naphtol Blue G and Cyanole Fast Green G.

Alphanol Blue BR extra, GN and **5RN** possess very good fastness to light, perspiration, washing, and milling, the last-mentioned property rendering them particularly valuable for goods which after dyeing have to be subjected to a further washing or milling. In point of fastness to rubbing and carbonising, the dyeings likewise behave exceedingly well; the fastness to steaming is satisfactory for ordinary requirements and may be increased by an aftertreatment with 3 % sulphate of copper.

These dyestuffs are used very largely for materials which are steamed at not too high a pressure. For bright shades of navy blue, the shading is done with Brilliant Milling Blue and Formyl Violet, and for very dark blues with Alphanol Black 3BN.

Method of Dyeing:

FOR LANACYL NAVY BLUE.

Charge the bath with

20 % Glauber's salt crystals,
10 % acetic acid and the dyestuff.

Enter the goods handwarm, raise in about 3/4 hour to boiling temperature, after one hour's boiling add 4–5 % bisulphate of soda in several portions, and after making the last addition boil for another 1/4 hour.

For subsequent shading, the easily levelling dyestuffs indicated for Peri Wool Blue on page 1: Azo Wool Blue SE, Tetra Cyanole V, Cyanole Fast Green G, Azo Orseille BB and Orange GG are used to advantage.

FOR ALPHANOL BLUE.

Dye with the addition of

10 % Glauber's salt crystals and
5 % acetate of ammonia (neutral);

enter the well scoured goods at 40–50° C. (105—120° F.), raise to about 90° C. (195° F.) in the course of 3/4 hour, and dye for 1 to 1 1/4 hours at this temperature. The dyebaths become almost entirely exhausted.

Special care has to be taken to scour the pieces well; in the case of goods containing residues of alkali, it is best, in addition to the acetate of ammonia, to add 1/2 % bichrome. Carbonised goods should be completely neutralised before the dyeing.

For subsequent shading, Tetra Cyanole V and A, Acid Violet 6BS, Brilliant Lanafuchsine SL, Fast Acid Yellow TL and Orange extra principally are used, and may be added straightaway to the hot bath.

4

Lanacyl Navy Blue B pat.
shaded with
Lanacyl Violet BF pat.

5

Alphanol Blue BR extra
and 5RN

6

Alphanol Blue BR extra
and GN
shaded with
Alphanol Black 3BN

BLUE DYED IN THE PIECE
WITH
ANTHRACENE ACID BLUE EB, ER
AND
ANTHRACENE CHROME BLUE F, FR.

Anthracene Acid Blue EB and **ER** may be dyed by the after-chroming method or on previously chromed goods, yielding by either of these methods bright navy to dark blue shades of very good fastness, the cost of production at the same time being very satisfactory. Contrary to many other Chrome Colours, their shade is not altered in artificial light, and with nitric acid they yield a test similar to that of Indigo. Cotton effect threads and selvedges are not stained.

These products are already used to the widest extent in fast wool piece-dyeing.

Anthracene Chrome Blue F and **FR** on piece-goods are applied principally on a chrome mordant, and are especially useful for gentlemen's suitings and tapestry cloth as well as for military cloth and fine qualities of cloth.

In point of fastness to light, Anthracene Chrome Blue F behaves exceedingly well, counting among the Blues of the very best fastness in this respect. The products possess excellent levelling properties, so that they are to be recommended also for goods which do not level well or are difficult to penetrate. Anthracene Chrome Blue F leaves effect threads of cotton or silk undyed, FR only such of cotton.

Other important brands which possess the same properties and are used for shading purposes principally, are

Anthracene Chrome Blue R, BB and G.

Method of Dyeing:

FOR ANTHRACENE ACID BLUE.

a) After-Chroming Process.

Dye with the addition of

20 % Glauber's salt crystals
4–5 % acetic acid.

Enter the goods at 40° C. (105° F.) raise in ¾ hour to the boil, and boil for about an hour; then gradually add some acetic acid if necessary in order to exhaust the bath. Hereafter cool off a little, and chrome with half as much bichrome as of dyestuff used, for ½ to ¾ hour at the boil.

b) Dyeing on a Chrome Mordant.

According to the depth of shade required, mordant the goods with

2–4 % bichrome
1,5–3 % tartar *

for 1½ hours at the boil, then rinse, and dye with the addition of 2–3 % acetic acid. Enter handwarm, raise in ¾ to 1 hour to the boil, and boil for 1½ hours; in order to exhaust the bath, gradually add 2—4 % acetic acid after an hour's boiling.

FOR ANTHRACENE CHROME BLUE.

The goods are mordanted in the same manner as indicated above under (b), and, after rinsing, are dyed with the addition of 4—5 % acetic acid. Enter at about 50° C. (120° F.), raise gradually in ½ hour to boiling heat, add 3–5 % acetic acid after ¾ hour's boiling in order to exhaust the bath, boiling altogether for 1½ to 1¾ hours.

Dark shades it is advisable to after-chrome with ½ % bichrome for 20 minutes at the boil in order to enhance the fastness to alkalies and potting.

For the production of brighter shades, Brilliant Milling Blue B, Tetra Cyanole A and the various brands of Formyl Violet are used chiefly, both for dyeing by the after-chroming process and on previously chromed wool.

For the subsequent shading, easily levelling dyestuffs principally are used, which may be added direct to the boiling liquor; the best suited for this purpose are the following:

Tetra Cyanole V, A	Fast Acid Yellow TL
Cyanole FF	Orange GG
Cyanole Fast Green G	Azo Orseille BB
Cyanole Green B, 6G	Acid Violet 6BS, 6BC.

If large additions of Anthracene Colours have to be made for shading subsequently, the bath should first be cooled off a little, except in the case of Anthracene Chrome Blue F, and then raised again to the boil and boiled for another 20 to 30 minutes.

After dyeing, rinse well, and if necessary, give a slight washing with fuller's earth in order to improve the fastness to rubbing.

When dyeing in copper vessels, charge the dyebath first with ½ % sulphocyanide of ammonia, calculated on the weight of the goods, stir well, and allow to stand for 20 minutes before adding the Glauber's salt, acid and dyestuff.

---

* Instead of bichrome and tartar, bichrome in combination with formic acid, lactic acid, lactoline, etc. may be used for mordanting.

7

Anthracene Acid Blue pat.
ER and EB
(after-chromed)

8

Anthracene Acid Blue pat.
EB and ER
shaded with
Brilliant Milling Blue B pat.
(after-chromed)

9

Anthracene Chrome Blue pat.
F and FR
shaded with
Brilliant Milling Blue B pat.
Formyl Violet 4BF
(dyed on a chrome mordant and slightly after-chromed)

BLUE DYED IN THE PIECE
WITH
ANTHRACENE CHROME BLUE BST AND RST.

Anthracene Chrome Blue BST and **RST** are always dyed on chromed wool, yielding bright blue to dark blue shades with an intense greenish blue cast in transmitted light (Indigo cast). The dyeings retain their fine tone in artificial light, and when spotted with nitric acid show a yellowish test. The fastness to light of these products is excellent, and in other respects also the dyeings answer all the demands which are made of goods dyed in the piece.

The dyestuffs are used for the production of fast blue shades on any kind of goods, particularly when brightness and fulness of shade in addition to best possible fastness are required.

To this same group belong

Anthracene Chrome Blue BW extra and RRW extra,

which are not quite equal to BST and RST in brightness, and are used principally for loose wool, hanks, and slubbing.

Method of Dyeing:

According to the depth of shade required, mordant the goods with

2 –4 % bichrome and
1,5–3 % tartar*

for 1½ hours at the boil, rinse, and dye with the addition of acetic acid. For Anthracene Chrome Blue BST and RST, add 3 % acetic acid to the bath (4 % in the case of hard water), but 1–2 % acetic acid will be found sufficient for BW extra and RRW extra. Enter handwarm, raise in 1 to 1¼ hours to the boil, and boil for about 1½ hours; after one hour's boiling, gradually add 2–4 % acetic acid in order to exhaust the bath. To ensure complete fastness to rubbing, wash finally with fuller's earth and the addition of acetic acid.

As shading dyestuffs, Brilliant Milling Blue B, Tetra Cyanole A and the various Formyl Violet brands come into consideration for brightening purposes, and for saddening, Wool Red B and Anthracene Chrome Blue F and R in particular.

For subsequent shading, easily levelling dyestuffs are best used, which may be added straight to the boiling liquor; the following are particularly well suited:

Tetra Cyanole V, A	Fast Acid Yellow TL
Cyanole FF	Orange GG
Cyanole Fast Green G	Azo Orseille BB
Cyanole Green B, 6G	Acid Violet 6BS, 6BC.

If the subsequent shading is to be done with Anthracene Chrome Blue, the bath must be cooled off well, and then raised again gradually to the boil.

In order to dissolve Anthracene Chrome Blue BW extra or RRW extra, mix them with some ammonia (about 6–7 oz ammonia to 1 lb of dyestuff), then adding hot water.

* Instead of bichrome and tartar, bichrome in combination with formic acid, lactic acid, lactoline etc., may be used for mordanting.

10

Anthracene Chrome Blue pat.
BST and RST
(on a chrome mordant)

11

Anthracene Chrome Blue pat.
RST and BST
(on a chrome mordant)

12

Anthracene Chrome Blue pat.
RST and BST
(on a chrome mordant)

BLACK DYED IN THE PIECE
WITH
NAPHTYLAMINE BLACK ESN
AND
NAPHTYLAMINE BLUE BLACK B.

Naphtylamine Black ESN and **Naphtylamine Blue Black B** as well as *Naphtylamine Black S* are the Acid Blacks now used more than any others for gentlemen's wear, both for plain goods and such containing effect threads. The dyeings, which are cheap to produce, possess very good fastness to light, steaming, and rubbing; they are perfectly fast to carbonising and acids, and in other respects also answer the normal requirements for fastness made of goods dyed by the one-bath method. Their excellent fastness to acids renders them particularly important also for dyeing carbonised, non-neutralised goods.

Naphtylamine Black ESN yields neutral blacks possessing a blue cast in transmitted light, similar to that of logwood; Naphtylamine Blue Black B is somewhat fuller, and is used principally for deeper blacks. The behaviour of the dyeings in artificial light is very good.

Some other brands belonging to the same group, viz:

Naphtylamine Black ES3B, ES5B, ES8B and EFF
Naphtylamine Blue Black 5B

are distinguished from those first mentioned, particularly by their more bluish shade.

Naphtylamine Black EFF is of chief importance for materials containing cotton effect threads which must not be stained at all.

Method of Dyeing:

Dye with the addition of

10 % Glauber's salt crystals and
10 % bisulphate of soda
or
20 % Glauber's salt and
4 % sulphuric acid;

enter at about 70° C. (160° F.), raise the bath in 20 to 30 minutes to the boil, and boil for one hour. Hereafter add a little bisulphate of soda or acid in order to completely exhaust the liquor, and boil for another 20 to 30 minutes. It is especially important in the case of goods containing cotton shots to exhaust the liquor thoroughly.

Goods difficult to penetrate such as heavily milled cloth, meltons, etc., are entered at about 40–50° C. (105—120° F.), the temperature being then gradually raised to the boil; it is advisable for such goods also to increase the quantity of Glauber's salt. The dyeing of carbonised, non-neutralised goods is commenced with 20 % Glauber's salt only, a little bisulphate of soda or acid being added later on if necessary.

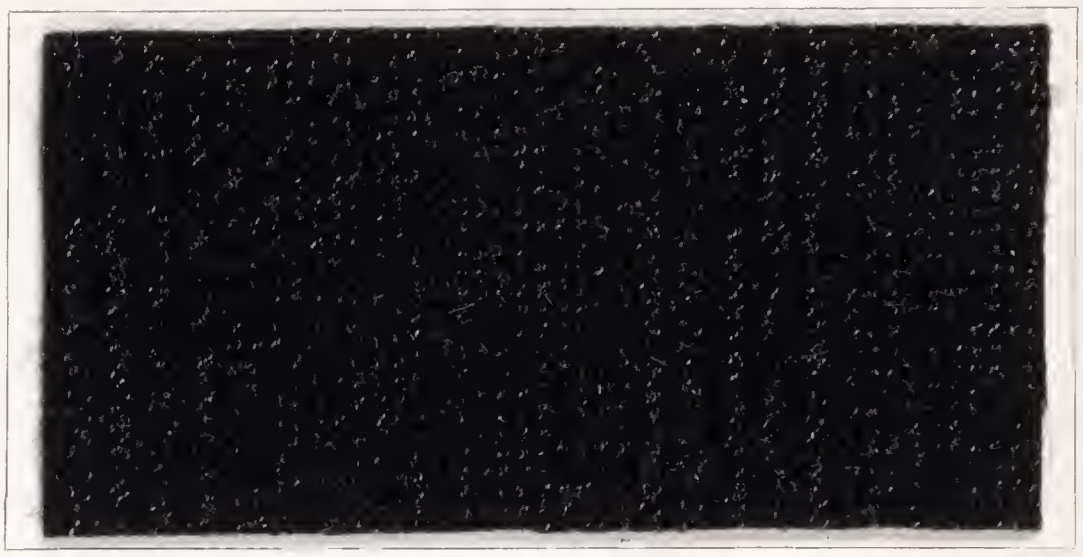
For shading and saddening purposes,

Acid Yellow AT	Orange GG, extra, II
Fast Yellow S	Brilliant Milling Green B
Tropaeoline OO, O	Cyanole Green B, 6G

principally are used. These dyestuffs may be used also for shading subsequently in the boiling bath; when adding Naphtylamine Black or Naphtylamine Blue Black subsequently, however, the bath has to be cooled off previously, being then brought gradually again to the boil.

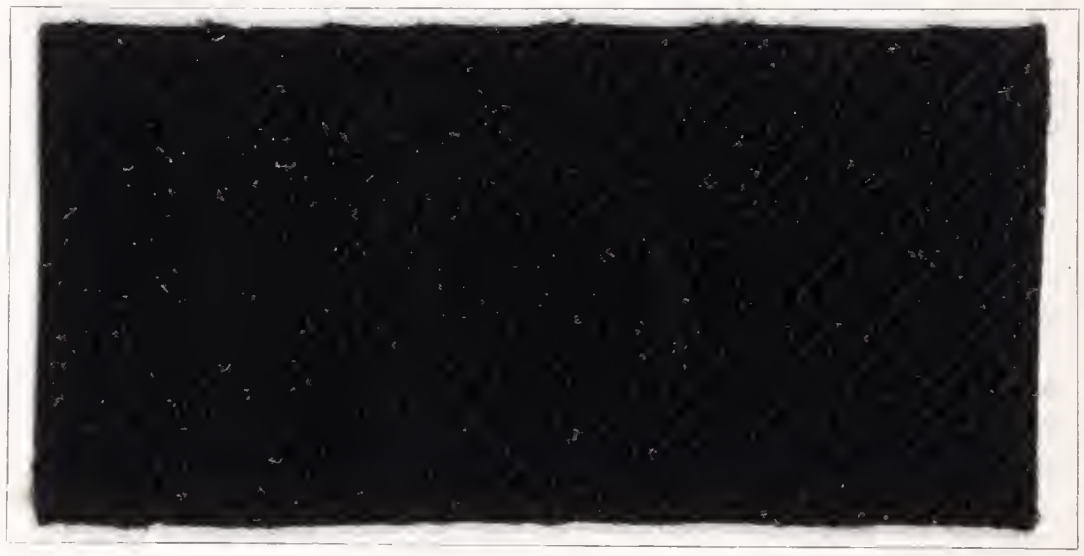
13

Naphtylamine Black ESN
shaded with
Orange GG



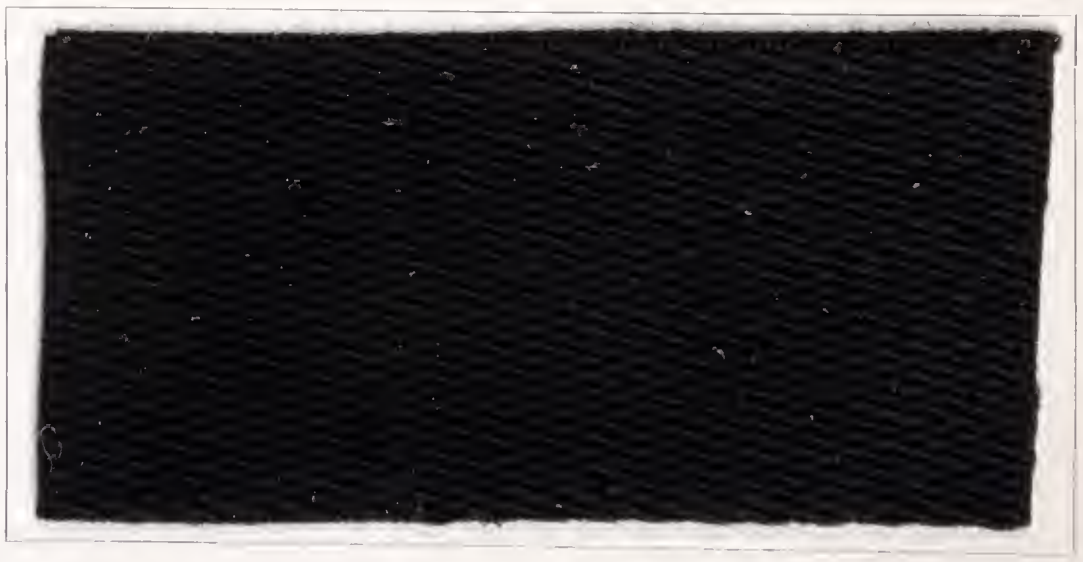
14

Naphtylamine Blue Black B
shaded with
Acid Yellow AT



15

Naphtylamine Blue Black B
shaded with
Fast Yellow S
Brilliant Milling Green B



BLACK DYED IN THE PIECE
WITH
NAPHTYLAMINE BLACK S, SGG AND TN.

Naphtylamine Black S, SGG and **TN** in general possess the same properties of fastness as Naphtylamine Black ESN and Naphtylamine Blue Black B, their behaviour also being the same, and are used very largely for plain goods and goods containing effect threads.

Naphtylamine Black S is the most widely used brand of the group. By reason of its full blue-black shade it is employed both for light and deep shades of black, more particularly in the dyeing of finer grade cloth and worsteds.

Naphtylamine Black SGG, while possessing the same properties, is of a more greenish shade than "S", and is employed for Blacks with a greenish cast.

Naphtylamine Black TN is brighter in shade and possesses great covering power, being employed principally for the production of jet blacks on moltons and worsteds.

Further important brands of the Naphtylamine Black S series which are used for the same purposes, but are distinguished by their different shade and covering power, are the following:

Naphtylamine Black 4BS, T, TJ, SS2B and SS3B.

Method of Dyeing:

The products are dyed in the same manner as indicated for Naphtylamine Black ESN on page 5, and are likewise shaded with the same dyestuffs.

16

Naphtylamine Black S
shaded with
Acid Yellow AT

17

Naphtylamine Black SGG
shaded with
Fast Yellow S

18

Naphtylamine Black TN
shaded with
Acid Yellow AT
Brilliant Milling Green B

BLACK DYED IN THE PIECE WITH NAPHTYLAMINE BLACK 4B OR NAPHTYLAMINE BLUE BLACK B IN COMBINATION WITH LOGWOOD, WITH NAPHTYL BLUE BLACK N IN COMBINATION WITH SUMAC.

NAPHTYLAMINE BLACK 4B AND NAPHTYLAMINE BLUE BLACK B IN COMBINATION WITH LOGWOOD

(so-called "Combination Black").

The combination of Acid Black and Logwood is used very largely, particularly for worsteds and broad cloth. A fine brilliancy and handle are thereby imparted to the material, and bluish shades of Black are obtained at a low cost, which compared with dyeings produced with Logwood alone, possess considerably better fastness to acids and to light. According to requirement, the goods are shaded with Naphtol Dark Green G, Brilliant Milling Green B and Anthracene Yellow C, and for Jet Blacks they may be saddened with Fustic Extract.

The following are the brands most frequently employed:

Naphtylamine Black 4B, 6B, 19J, ESN
Naphtyl Blue Black N
Naphtylamine Blue Black B
Naphtylamine Blue Black 5B } for Blue-black
Naphtylamine Black 7BS }
Naphtylamine Black X2B, X3B, for very cheap Blacks.

Of the previously mentioned products, Naphtyl Blue Black N, Naphtylamine Blue Black B and 5B, and Naphtylamine Black 7BS, ESN and 6B yield the dyeings of best fastness to light.

Method of Dyeing:

Charge the dyebath with

2 3 % oxalic acid (according to the hardness of the water) and
10—20 % Glauber's salt crystals,

then add the requisite amount of dyestuff and logwood extract or Hematine crystals (as well as of fustic extract if necessary), boil up the bath, enter the wetted goods, and run for 20 to 30 minutes without steam, and then for about an hour at the boil. If the bath has not become yellowish brown by this time, a sign that the black dyestuff has not been fully absorbed, the boiling must be continued for another 15 to 20 minutes with the addition of ½—1 % oxalic acid.

Hereafter add 6 % copperas and
3 % sulphate of copper,

and boil for another ¼ hour.

After dyeing, rinse thoroughly, or, if necessary, wash with fuller's earth and the addition of a little acetic acid.

Another method, which is followed by some dyers, but which yields dyeings of not quite the same fastness to light, is the following:

Charge the dyebath with

4–6 % copperas
2–3 % sulphate of copper and Logwood Extract or Hematine crystals and Fustic Extract if necessary,

and then add oxalic acid (on an average 2 % of the weight of the goods) until the black precipitate present in the bath has become dissolved and the liquor assumed a yellowish appearance.

Hereafter add the requisite amount of Naphtylamine Black, Naphtyl Blue Black or Naphtylamine Blue Black in solution. Enter the goods at 60–70° C. (140–160° F.), raise in 20 minutes to boiling temperature, and boil for about 1¼ hours. After this time ½—1 % oxalic acid may be added, if necessary, in order to better exhaust the bath. Then rinse thoroughly, or wash if necessary with fuller's earth and a little acetic acid.

NAPHTYL BLUE BLACK N IN COMBINATION WITH SUMAC.

The combination of Naphtyl Blue Black and Sumac Extract is employed as a substitute for Logwood and Iron Black, and is largely used for dyeing fine qualities of gentlemen's worsted coatings.

This method of dyeing gives a full handle and good lustre to the goods, such as is obtained by dyeing with Logwood and iron, and also increases the weight by 6–8 %. Compared with a Logwood and Iron Black it offers the advantages of a simpler and shorter method of dyeing, a much better fastness to light and acids, cotton selvedges and effect threads are left clearer, whilst vegetable impurities, such as burrs, jute, and bits of wood and straw are very well covered.

In order to obtain good fastness to rubbing, it is sufficient to rinse the dyed pieces in cold water for ½ to ¾ hour. Logwood- and Iron-Black on the other hand has to be washed with fuller's earth for several hours in order to ensure the same results.

Method of Dyeing:

Charge the dyebath, for instance, with

3–4 % oxalic acid (according to the hardness of the water)
20 % Glauber's salt crystals
7 % Naphtyl Blue Black N
0,5 % Brilliant Milling Green B
7 % Sumac Extract of 52° Tw.

Boil up the bath, enter the goods, and run for ½ hour without steam and for about an hour at the boil. If by that time the bath is not yet exhausted, another ½—1 % oxalic or formic acid should be added. When completely exhausted, add

3 % sulphate of copper and
4–5 % copperas

boil for another ½ hour, and rinse in cold water for ½ to ¾ hour.

The dyebath may be used over again for subsequent lots, in which case add oxalic acid to the liquor until the precipitate is completely dissolved, then 5 % Glauber's salt, and finally the dyestuff and 3½—4 % sumac extract, the working otherwise being the same as in the case of the first lot.

In addition to Naphtyl Blue Black N, the following dyestuffs principally are suited for this method:

Alphanol Black 3BN and BG
Naphtylamine Black 4B, 6B und ESN.

BLACK DYED IN THE PIECE WITH
NAPHTYLAMINE BLACK 4B AND NAPHTYLAMINE BLUE BLACK B IN COMBINATION WITH LOGWOOD,
NAPHTYL BLUE BLACK N IN COMBINATION WITH SUMAC.

19

Naphtylamine Black 4B
Logwood Extract
Fustic Extract
(Combination Black)

20

Naphtylamine Blue Black B
Hematine Crystals
shaded with
Naphtol Dark Green G
(Combination Black)

21

Naphtyl Blue Black N
Sumac Extract
shaded with
Brilliant Milling Green B
(Sumac Process)

CASSELLA COLOR COMPANY, NEW YORK.

BLACK DYED IN THE PIECE
WITH
ANTHRACENE CHROME BLACK.

The **Anthracene Chrome Blacks** yield Blacks of eminent fastness in every respect, and are to be given the preference when high or even the very highest requirements for fastness are made. Particularly also are they useful for goods which are subjected after the dyeing to an alkaline washing or milling, or to the wet steaming or the potting process.

Anthracene Chrome Black PPC extra, PBB, PPT extra and PPS extra, and the brand of **Anthracene Chrome Black 5B** used for shading, are the products most frequently employed; both in fastness to light and fastness to potting they behave the best, and they in fact represent the best fastness which it is possible to obtain with any Black.

Anthracene Chrome Black PPC extra dyes neutral shades of Black; PBB and PPS extra on the other hand yield blacks of a pronounced blue cast, PPT extra a covered Black, and 5B a blue-black with a strong greenish cast.

For materials containing cotton effect threads, Anthracene Chrome Black PPS extra comes chiefly into consideration, as it leaves the cotton entirely unstained and yields dyeings which are entirely fast to alkalies and hot pressing.

Other brands used very largely for piece-goods are
Anthracene Chrome Black PPN extra, PFB extra, P extra, F and FE.

Method of Dyeing:

Dye with the addition of

10 % Glauber's salt crystals and
3 -4 % acetic acid;

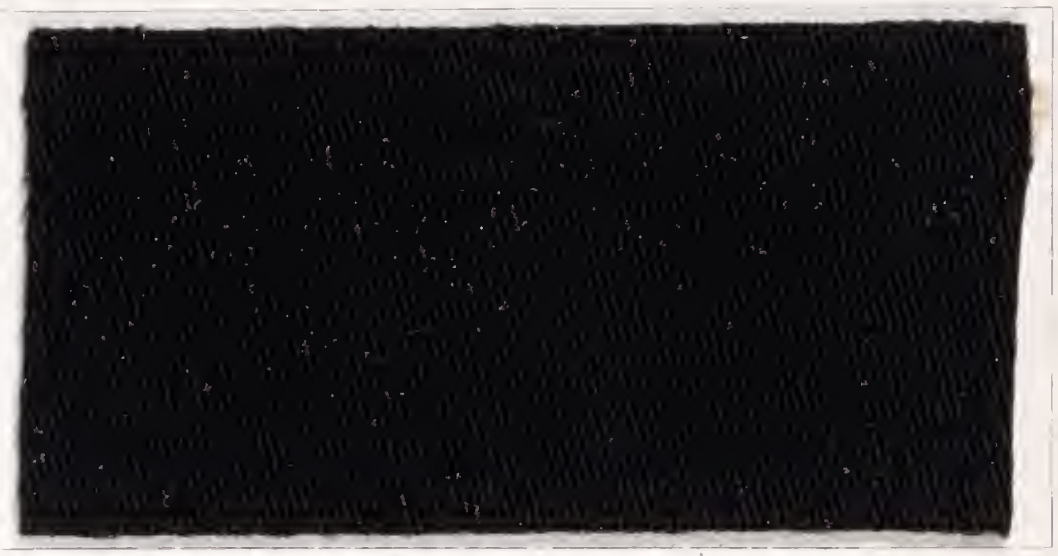
enter the goods at about 70° C. (160° F.), raise in 15 to 20 minutes to boiling temperature, exhaust the bath after 1/2 hour's boiling by gradually adding 2–3 % sulphuric acid, and chrome for about 3/4 hour at the boil with one-third the amount of bichrome as of dyestuff used.

When dyeing Anthracene Chrome Black F or FE in calcareous water, the bath should be charged first with 2 % oxalate of ammonia, being stirred thoroughly before adding the acid and dyestuff.

For shading, Anthracene Yellow BN, Anthracene Acid Brown G, Brilliant Milling Green B and the various brands of Formyl Violets are used principally. If any of these dyestuffs or Anthracene Chrome Black are used for subsequent shading, the bath should be cooled off a little beforehand, being then raised again gradually to the boil and boiling being continued for 20 to 30 minutes.

22

Anthracene Chrome Black pat.
P P C extra and 5 B
(after-chromed)



23

Anthracene Chrome Black pat.
P B B and P P T extra
shaded with
Anthracene Yellow B N
(after-chromed)

24

Anthracene Chrome Black
P P S extra pat.
shaded with
Anthracene Yellow B N
(after-chromed)

CASSELLA COLOR COMPANY, NEW YORK.

PIECE-GOODS WOVEN WITH COLOURED WORSTED EFFECT THREADS
AND THEN DYED WITH
ANTHRACENE CHROME COLOURS.

For producing fast compound shades on gentlemen's suitings, combinations of **Anthracene Chrome Blue F, Anthracene Yellow BN** and **Anthracene Chrome Red A** are used in the first place. These colouring matters yield dyeings of very good fastness, and possess very good levelling and penetrating properties; cotton effects as well as silk effects, particularly when dyeing on a chrome mordant, remain entirely unstained. The dyeing is generally carried out according to the after-chroming process with the addition of Glauber's salt and sulphuric acid, but may also be done on a chrome mordant.

For materials with a dark back, **Azo Chrome Blue AI**, likewise in combination with Anthracene Yellow BN and Anthracene Chrome Red A, has proved very serviceable, owing to its property of dyeing the dark back in the same tone as the face of the goods. This combination like that with Anthracene Chrome Blue F is dyed with sulphuric acid direct; cotton effect threads remain entirely unstained.

Further combinations applied for compound shades are those of Anthracene Blue Black C, BE, Anthracene Chrome Brown SWN, DWN, D, Anthracene Yellow BN, Anthracene Chrome Red A and Anthracene Chrome Violet B, which are dyed either with the addition of acetic acid or on a chrome mordant. Further, Anthracene Chromate Brown EB, Anthracene Yellow BN, Anthracene Blue Black C, Chromate Blue Black B, Anthracene Chromate Blue XR, dyed according to the Chromate process are used.

Method of Dyeing:

FOR COMBINATIONS OF ANTHRACENE CHROME BLUE, AZO CHROME BLUE, ANTHRACENE YELLOW AND ANTHRACENE CHROME RED.

a) After-Chroming Process.

Dye with the addition of

10 % Glauber's salt and

2—4 % sulphuric acid (according to the depth of shade required); enter the goods at about 50° C. (120° F.), raise the bath in 1/2 hour to the boil, and boil for about an hour; then cool off, and chrome for 3/4 hour at the boil with about two-thirds of the weight of bichrome as of dyestuff used.

b) Dyeing on a Chrome Mordant.

According to the depth of shade required, mordant the goods with

1,5—3 % bichrome and

1—2,5 % tartar *

* Instead of bichrome and tartar, bichrome in combination with formic acid, lactic acid, lactoline etc. may be used for mordanting.

for 1½ hours at the boil, rinse, and dye with the addition of 1–3% acetic acid, or of 5% acetate of ammonia for very light shades. Enter the goods at 40–50° C. (105–120° F.), raise in ½ hour to the boil, and boil for about 1½ hours; after one hour's boiling, add a little acetic acid if necessary in order to exhaust the bath.

FOR COMBINATIONS OF ANTHRACENE BLUE BLACK, ANTHRACENE CHROME BROWN, ANTHRACENE YELLOW, etc.

a) After-Chroming Process.

Charge the bath with

10% Glauber's salt crystals,
2–3% acetic acid

and the requisite dyestuff; enter the goods at about 50° C. (120° F.), raise in ½ hour to the boil, gradually exhausting the bath after about ¾ hour's boiling by the addition of acetic acid, or of sulphuric acid in the case of dark shades. Hereafter cool off, and chrome with about one-half the amount of bichrome as of dyestuff used, for ¾ hour at the boil.

b) Dyeing on a Chrome Mordant.

The method of working is the same as indicated above for the Anthracene Chrome Blue combinations.

FOR ANTHRACENE CHROMATE COLOURS.

These dyestuffs are dyed by adding the bichrome either straight to the bath or subsequently; for full particulars see our card No 3265 "One-Bath Dyeings of Anthracene Chromate Colours Fast to Milling".

For the subsequent shading of the dyeings produced according to the various methods, easily levelling dyestuffs are usually employed which may be added straight to the boiling bath. For this purpose the following are the best suited:

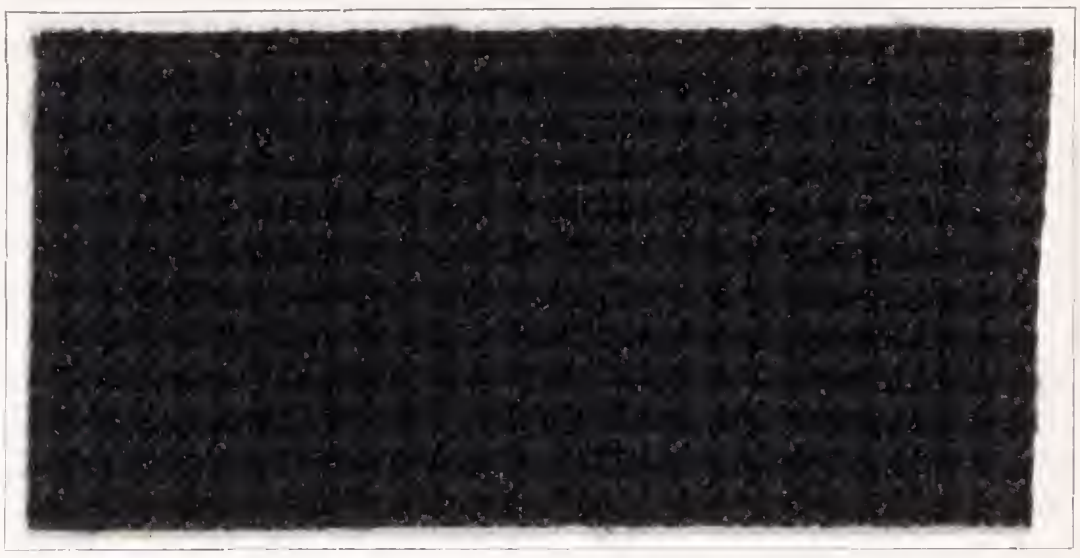
Tetra Cyanole V	Fast Acid Yellow TL
Cyanole FF	Orange GG
Cyanole Fast Green G	Azo Orseille BB.

If it should be necessary to add more of the Chrome Colour, the bath should previously be cooled down a little; it is afterwards brought gradually again to the boil, the goods being then treated boiling for 20 to 30 minutes.

When dyeing Anthracene Chrome Blue, Anthracene Chrome Violet and Anthracene Blue Black BE in copper vessels, charge the bath first with ½% ammonium sulphocyanide of the weight of the goods at a temperature of 50° C. (120° F.), stir thoroughly, and leave the bath standing for 20 minutes before adding the Glauber's salt, acid and dyestuff.

Regarding the effect colours on worsted yarn see page 10.

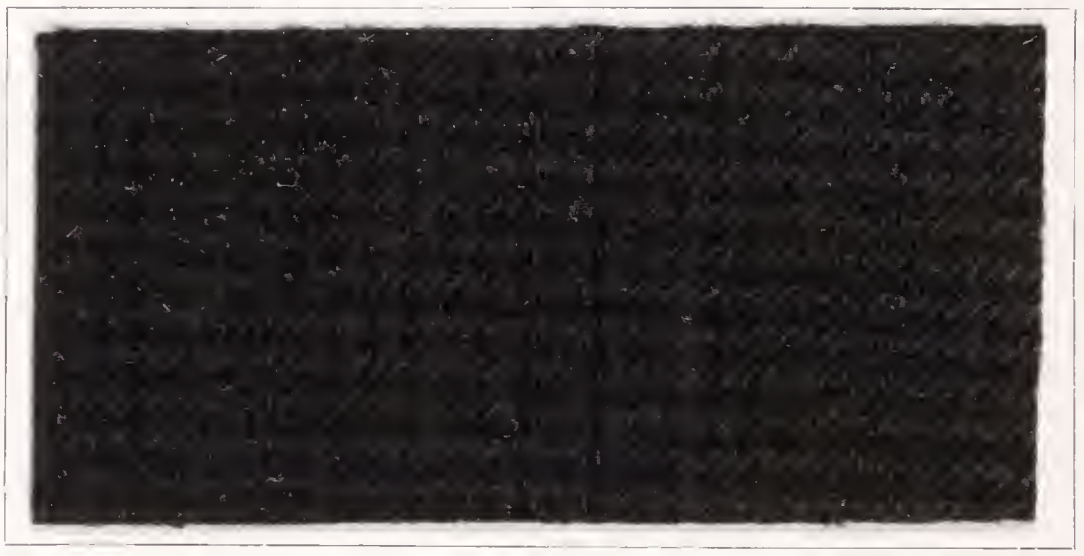
25



The Dark Shot Effects were previously dyed in the hank with
Anthracene Blue Black C pat.
Anthracene Yellow B N
Anthracene Chrome Brown S W N pat.
(after-chromed)

The Cloth after weaving with plain white yarn was dyed with
Anthracene Chrome Blue F pat.
Anthracene Yellow B N
Anthracene Chrome Red A
(after-chromed)

26

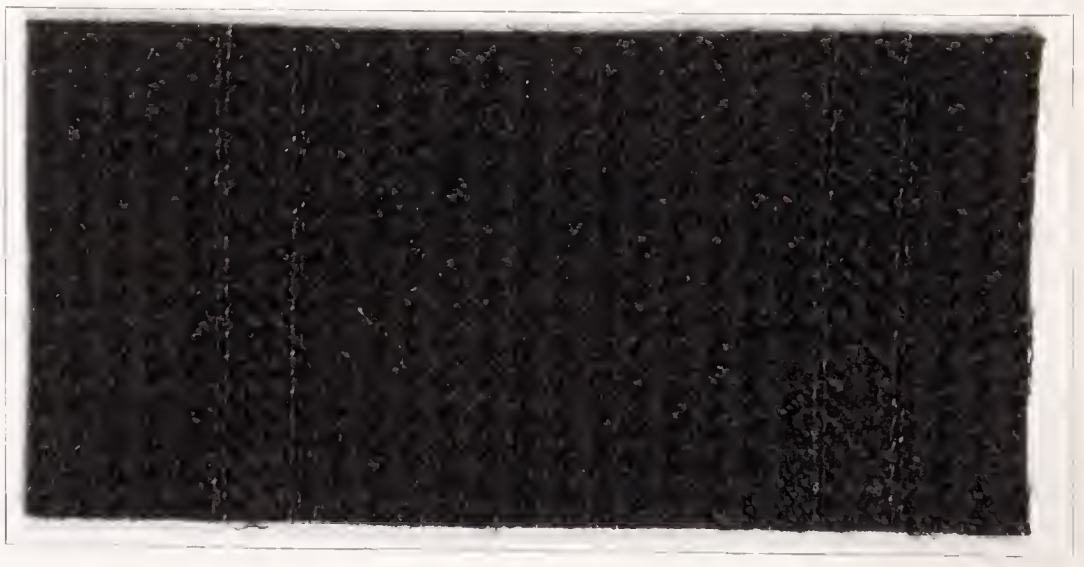


The Worsted Warp was dyed with
Anthracene Chrome Black P P N extra pat.
(after-chromed)

The Worsted Weft was dyed with
Anthracene Blue Black C pat.
Anthracene Yellow B N
Anthracene Chrome Brown S W N pat.
(after-chromed)

The Woven Tissue was dyed with
Azo Chrome Blue A I
Anthracene Yellow B N
Anthracene Chrome Red A
(after-chromed)

27



CLOTH DYED IN THE YARN
WITH
ANTHRACENE CHROME COLOURS.

Black.

For the well-known yarn-dyed black and white style, as well as for other fast black yarns, the various Anthracene Chrome Black brands are the most largely employed. Their dyeings are eminently fast to washing, milling, steaming and light; moreover the "PP" and "P" brands possess good fastness to potting, particularly the PPC extra, PPN extra, P extra and PFB extra brands, which are extremely good in this respect.

Without exception these products are easily soluble; they level very well, and are of special interest for the dyeing of hanks and slubbing in machines.

The brands used principally for hanks are the following:

Anthracene Chrome Black PBB, PPS extra, P extra and **F** for bluish blacks,

Anthracene Chrome Black PPC extra, PPN extra, PFB extra and **PPT extra** for neutral and covered blacks.

Method of Dyeing:

For hanks, the same directions apply as are indicated for piece-goods on page 8 for Anthracene Chrome Black.

Compound Shades.

The dyestuffs and combinations indicated for dyeing the shades contained in the yarn-dyed fabrics Nos 29 and 30 as well as in the piece-dyed fabrics Nos 25–27, also the respective shot effects, have proved exceedingly serviceable for the dyeing of yarns in fast colours, and are used generally for this purpose. The dyestuffs level exceedingly well both in the dye vessel and in apparatus, yielding colours of excellent fastness in every respect.

The shading dyestuffs for mode colours, browns and other compound shades which come in the first place into consideration are Anthracene Chrome Red A and Anthracene Chrome Violet B; for dark colours, Anthracene Chrome Blue Black BE is mostly used as a saddening agent in the place of Anthracene Blue Black C.

For further combinations for the production of all kinds of shades on yarn see page 5 and following pages of our book "Chrome Colours for Wool" (No 3157).

Method of Dyeing:

Dye with the addition of

10 % Glauber's salt crystals and
2–3 % acetic acid;

enter the goods at about 50° C (120° F.), raise in ½ hour to the boil, and after ¾ hour's boiling gradually exhaust the bath with acetic or sulphuric acid. Hereafter cool off, and chrome for ¾ hour at the boil with about one-half the weight of bichrome as of dyestuff, in the case of Anthracene Chrome Violet and Anthracene Chrome Blue with about two-thirds the amount of bichrome as of dyestuff.

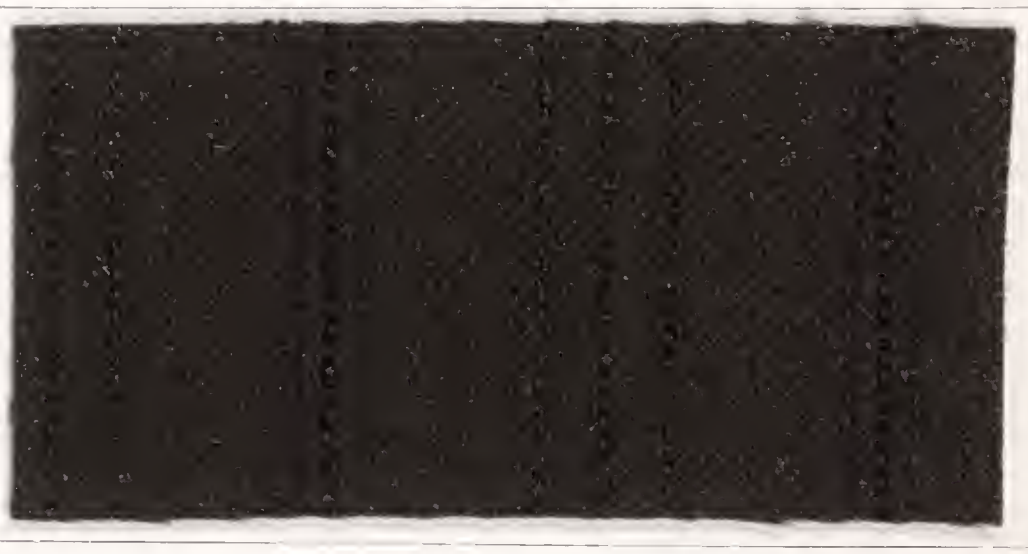
For subsequent shading, easily levelling dyestuffs are usually employed which may be added straight to the boiling bath. For such purpose, Tetra Cyanole V and A, Cyanole FF, Cyanole Fast Green G, Fast Acid Yellow TL, Orange GG and Azo Orseille BB are the best suited. If there are considerable deviations in the shade, it is best to add the same Chrome Colours as have been used in the dyeing; in such case, first cool down the bath, then raise again gradually to the boil, and treat for 20 to 30 minutes at the boil.

When dyeing with Anthracene Chrome Blue, Anthracene Chrome Violet and Anthracene Blue Black BE in copper vessels, first charge the bath at 50° C (120° F.) with ½0 % sulphocyanide of ammonia, calculated on the weight of the goods, stir thoroughly, and allow to stand for 20 minutes before adding the Glauber's salt, acid and dyestuff.

28

Anthracene Chrome Black
PPT extra pat.
(after-chromed)

29



Olive Ground Shade:
Anthracene Chrome Brown
SWN pat.
Anthracene Yellow BN
Anthracene Blue Black C pat.
(after-chromed)

Violet Stripe:
Anthracene Chrome Violet B
Formyl Violet S4B
(after-chromed)

Blue Stripe:
Anthracene Acid Blue EB pat.
Anthracene Chrome Violet B
(after-chromed)

Green Stripe:
Alizarine Brilliant Green SE pat.
Anthracene Chrome Blue G pat.
Anthracene Yellow BN
(after-chromed)

30

Without guarantee.

CONS.
SPECIAL

87-B
11945

THE GETTY CENTER
LIBRARY